Amendments to the Claims:

This listing of claims will replace all prior versions, and

listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A method for coding transform

coefficients ~~in picture and/or video coders and decoders~~

wherein

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for blocks of (video) pictures containing significant

transform coefficients, the coding of transform coefficients

takes place in such a way that, for each block,

—   ~~in a scan process,~~ a significance mapping is

arithmetically coded, the significance mapping specifying the

positions of significant transform coefficients in the block

in a scan order, the coding of the significance map comprising

coding, in the scan order, – except for the last scan position

in the scan order – a one-bit symbol (SIG) for each

coefficient of the block and a one-bit symbol (LAST) for each

significant coefficient of the block, wherein (SIG) serves for

identifying significant coefficients and (LAST) indicates

whether there are further significant transform coefficients

in the block, and subsequently,

- in a reverse scan order - starting with the last significant transform coefficients within the block - the values (levels) of the significant transform coefficients are ~~determined and~~ arithmetically coded.

Claim 2 (original): The method according to claim 1,

wherein

each significant transform coefficient of the block other than the last transform coefficient of the block is characterized by a one-bit symbol.

Claim 3 (original): The method according to claim 1,

wherein

for each significant transform coefficient, the sign is indicated by a one-bit symbol (SIGN) and the magnitude is indicated by a binary-coded symbol (ABS).

Claim 4 (currently amended): The method according to claim 1,

wherein

<u>the coding of the values of the transform coefficients</u>

<u>comprises indicating</u> the magnitude ~~is indicated by a symbol~~

~~(ABS) in unary binarization or~~ by a symbol (ABS) having a

prefix part and a suffix part, wherein the prefix part

consists of ones and the suffix part is coded in a 0th order

exp-golomb code.

Claim 5 (original): The method according to claim 1,

wherein

blocks containing significant transform coefficients are

characterized by a one-bit symbol CBP4 in connection with

further syntax elements, such as, for example, CBP or macro

block mode.

Claim 6 (canceled)

Claim 7 (currently amended): The method according to claim

[[6]]1,

wherein

modeling

- for the one-bit symbol CBP4,

- for coding the significance mapping and/or

- for coding the coefficient magnitudes

takes place in a context-dependent way.

Claim 8 (canceled)

Claim 9 (original): The method according to claim 1,

wherein

block types of transform coefficients having comparable

statistics are summarized to block categories.

Claim 10 (currently amended): An arrangement having at least

one of a processor and/or and a chip formed such that a method

for coding transform coefficients in picture and/or video

coders and decoders can be performed, wherein

for blocks of (video) pictures containing significant

transform coefficients, the coding of transform coefficients

takes place in such a way that, for each block,

- ~~in a scan process,~~ a significance mapping is

arithmetically coded, the significance mapping specifying the

positions of significant transform coefficients in the block

in a scan order, the coding of the significance map comprising

coding, in the scan order, - except for the last scan position

in the scan order - a one-bit symbol (SIG) for each

coefficient of the block and a one-bit symbol (LAST) for each

significant coefficient of the block, wherein (SIG) serves for

identifying significant coefficients and (LAST) indicates

whether there are further significant transform coefficients

in the block, and subsequently,

- in a reverse scan order - starting with the last

significant transform coefficients within the block - the

values (levels) of the significant transform coefficients

are ~~determined and~~ arithmetically coded.

Claim 11 (canceled)

Claim 12 (currently amended): A computer-readable storage

medium on which a computer program is stored, enabling a

computer, after having been loaded into the memory of the

computer, to perform a method for coding transform

coefficients ~~in picture and/or video coders and decoders~~,

wherein

for blocks of (video) pictures containing significant

transform coefficients, the coding of transform coefficients

takes place in such a way that, for each block,

- ~~in a scan process,~~ a significance mapping is

arithmetically coded, the significance mapping specifying the

positions of significant transform coefficients in the block

in a scan order, the coding of the significance map comprising

coding, in the scan order, - except for the last scan position

in the scan order - a one-bit symbol (SIG) for each

coefficient of the block and a one-bit symbol (LAST) for each

significant coefficient of the block, wherein (SIG) serves for

identifying significant coefficients and (LAST) indicates

whether there are further significant transform coefficients

in the block, and subsequently,

- in a reverse scan order - starting with the last

significant transform coefficients within the block - the

values (levels) of the significant transform coefficients

are ~~determined and~~ arithmetically coded.

Claim 13 (canceled)

Claims 14-23 (canceled)

Claim 24 (currently amended): A method for coding transform coefficients in picture and/or video coders and decoders

wherein

for blocks of (video) pictures containing transform coefficients being unequal to zero, a coding of transform coefficients takes place in such a way that, for each block,

a significance map is coded, the significance map specifying the positions of transform coefficients being unequal to zero in the block in a scan order in a context-dependent way using contexts depending on the corresponding scan position of the transform coefficient considered, and subsequently,

in a reverse scan order, starting with the last transform coefficient being unequal to zero within the block, the values (levels) of the transform coefficients being unequal to zero are coded in a context-dependent way using contexts depending on a number of transform

coefficients already coded in the reverse scan order

having a magnitude of 1 and a number of transform

coefficients already coded in the reverse scan order

having a magnitude of greater than 1, respectively.

Claim 25 (previously presented): The method according to

claim 24,

wherein

when coding the significance map, each transform coefficient

being unequal to zero in the scan order is characterized by a

first one-bit symbol (SIG) serving to characterize transform

coefficients being unequal to zero, i.e. each transform

coefficient being unequal to zero including the last transform

coefficient being unequal to zero in the scan order if it is

different from the last transform coefficient of the block in

the scan order, or excluding the last transform coefficient

being unequal to zero in the scan order if it is the last

transform coefficient of the block in the scan order, and the

last transform coefficient being unequal to zero is

characterized by a second one-bit symbol (LAST) indicating

that the respective transform coefficient being unequal to

zero is the last transform coefficient being unequal to zero

in the scan order if it is different from the last transform

coefficient of the block in the scan order.

Claim 26 (previously presented): The method according to

claim 24,

wherein

for each transform coefficient being unequal to zero, the sign

is indicated by a one-bit symbol (SIGN) and the magnitude is

indicated by a binary-coded symbol (ABS) .

Claim 27 (previously presented): The method according to

claim 24,

wherein

the magnitude is indicated by a symbol (ABS) in unary

binarization or by a symbol (ABS) having a prefix part and a

suffix part, wherein the prefix part consists of ones and the

suffix part is coded in a 0th order exp-golomb code.

Claim 28 (currently amended): The method according to claim

24,

wherein

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blocks containing transform coefficients being unequal to zero
are characterized by a one-bit symbol (CBP4) in connection
with further syntax elements, ~~such as, for example,~~ including,
(CBP) or macro block mode.

Claim 29 (currently amended): The method according to claim
24,

wherein

by transferring a one-bit symbol (SIG) for each coefficient of
a block and a one-bit symbol (LAST) for each transform
coefficient being unequal to zero of a block, the significance
map is coded, wherein the transfer takes place in [[a]]the
scan order, (SIG) serves for identifying transform
coefficients being unequal to zero and (LAST) indicates
whether there are further transform coefficients being unequal
to zero in the block.

Claim 30 (currently amended): The method according to claim
[[28]]9,

wherein

modeling

    for the one-bit symbol (CBP4),

    for coding the significance map and/or

    for coding the coefficient magnitudes

takes place in a context-dependent way.

Claim 31 (previously presented): The method according to claim 29,

wherein

no significance information (SIG, LAST) is transferred for the last scan position of a block.

Claim 32 (previously presented): The method according to claim 24,

wherein

block types of transform coefficients having comparable statistics are summarized to block categories.

Claim 33 (currently amended): An arrangement having at least

one processor and/or chip formed such that a method for coding

transform coefficients ~~in picture and/or video coders and~~

~~decoders~~ can be performed, wherein

for blocks of (video) pictures containing transform

coefficients being unequal to zero, a coding of transform

coefficients takes place in such a way that, for each block,

a significance map is coded, the significance map

specifying the positions of transform coefficients being

unequal to zero in the block in a scan order in a

context-dependent way using contexts depending on the

corresponding scan position of the transform coefficient

considered, and subsequently,

in a reverse scan order, starting with the last transform

coefficient being unequal to zero within the block, the

values (levels) of the transform coefficients being

unequal to zero are coded in a context-dependent way

using contexts depending on a number of transform

coefficients already coded in the reverse scan order

having a magnitude of 1 and a number of transform

coefficients already coded in the reverse scan order

having a magnitude of greater than 1, respectively.

Claim 34 (currently amended): A computer program, stored in a computer readable medium, enabling a computer, after having been loaded into the memory of the computer, to perform a method for coding transform coefficients ~~in picture and/or video coders and decoders~~, wherein

for blocks of (video) pictures containing transform coefficients being unequal to zero, a coding of transform coefficients takes place in such a way that, for each block,

a significance map is coded, the significance map specifying the positions of transform coefficients being unequal to zero in the block in a scan order in a context-dependent way using contexts depending on the corresponding scan position of the transform coefficient considered, and subsequently,

in the reverse scan order, starting with the last transform coefficient being unequal to zero within the block, the values (levels) of the transform coefficients being unequal to zero are coded in a context-dependent way using contexts depending on a number of transform coefficients already coded in the reverse scan order having a magnitude of 1 and a number of transform coefficients already coded in the reverse scan order

having a magnitude of greater than 1, respectively.

Claim 35 (currently amended): A computer-readable storage

medium on which a computer program is stored, enabling a

computer, after having been loaded into the memory of the

computer, to perform a method for coding transform

coefficients in picture and/or video coders and decoders,

wherein

for blocks of (video) pictures containing transform

coefficients being unequal to zero, a coding of transform

coefficients takes place in such a way that, for each block,

a significance map is coded, the significance map

specifying the positions of transform coefficients being

unequal to zero in the block in a scan order in a

context-dependent way using contexts depending on the

corresponding scan position of the transform coefficient

considered, and subsequently,

in a reverse scan order, starting with the last transform

coefficient being unequal to zero within the block, the

values (levels) of the transform coefficients being

unequal to zero are coded in a context-dependent way

using contexts depending on a number of transform

<u>coefficients already coded in the reverse scan order</u>

<u>having a magnitude of 1 and a number of transform</u>

<u>coefficients already coded in the reverse scan order</u>

<u>having a magnitude of greater than 1, respectively</u>.

Claim 36 (currently amended):   A ~~data stream representing a~~
computer program, <u>stored on a network for transfer and</u>

enabling a computer, after having been loaded into the memory

of the computer, to perform a method for coding transform

coefficients ~~in picture and/or video coders and decoders~~,

wherein

for blocks of (video) pictures containing transform

coefficients being unequal to zero, a coding of transform

coefficients takes place in such a way that, for each block,

a significance map is coded, the significance map

specifying the positions of transform coefficients being

unequal ·to zero in the block in a scan order <u>in a</u>

<u>context-dependent way using contexts depending on the</u>

<u>corresponding scan position of the transform coefficient</u>

<u>considered</u>, and subsequently,

in a reverse scan order, starting with the last transform

coefficient being unequal to zero within the block, the

values (levels) of the transform coefficients being

unequal to zero are coded in a context-dependent way

using contexts depending on a number of transform

coefficients already coded in the reverse scan order

having a magnitude of 1 and a number of transform

coefficients already coded in the reverse scan order

having a magnitude of greater than 1, respectively.

Claim 37 (currently amended): A method for decoding a coding

of a significance map and a subsequent coding of values of

transform coefficients being unequal to zero for blocks of

(video) pictures containing transform coefficients being

unequal to zero, the significance map specifying the positions

of the transform coefficients being unequal to zero in a scan

order, and the coding of values of transform coefficients

being unequal to zero comprising coded values of the transform

coefficients being unequal to zero in a reverse scan order -

starting with the last transform coefficient being unequal to

zero, comprising the ~~following steps~~steps of:

decoding the significance mapping in a context-dependent way

using contexts depending on the corresponding scan position of

the transform coefficient considered; and

decoding the coded values of transform coefficients being

unequal to zero in the reverse scan order in a context-
dependent way using contexts depending on a number of
transform coefficients already coded in the reverse scan order
having a magnitude of 1 and a number of transform coefficients
already coded in the reverse scan order having a magnitude of
greater than 1, respectively.

Claim 38 (currently amended): A device for decoding a coding
of a significance map and a subsequent coding of values of
transform coefficients being unequal to zero for blocks of
(video) pictures containing transform coefficients being
unequal to zero, the significance map specifying the positions
of the transform coefficients being unequal to zero in a scan
order, and the coding of values of transform coefficients
being unequal to zero comprising coded values of the transform
coefficients being unequal to zero in a reverse scan order -
starting with the last transform coefficient being unequal to
zero, comprising:

a decoder means for decoding the significance mapping order in
a context-dependent way using contexts depending on the
corresponding scan position of the transform coefficient
considered; and

means for decoding the coded values of transform coefficients

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being unequal to zero in the reverse scan order in a context-dependent way using contexts depending on a number of transform coefficients already coded in the reverse scan order having a magnitude of 1 and a number of transform coefficients already coded in the reverse scan order having a magnitude of greater than 1, respectively.

Claim 39 (new): The method according to claim 24, wherein coding the transform coefficients in the reverse scan order comprises

binarizing a magnitude of a each transform coefficient into a sequence of bins,

determining a context for the first bin of the magnitude of each transform coefficient based on a number of transform coefficients already coded in the reverse scan order having a magnitude of 1,

context-adaptively coding the first bins of the transform coefficients using the determined contexts.

Claim 40 (new): The method according to claim 33, wherein the determination of a context for the first bin of the magnitude of each transform coefficient is performed such that a first

predetermined context is used as soon as more than three

transform coefficients with a magnitude of 1 have been coded,

and a second predetermined context for all remaining transform

coefficients being unequal to zero within the block is used,

as soon as a transform coefficient having a magnitude greater

than 1 has been coded.

Claim 41 (new): The method according to claim 33, wherein

coding the transform coefficients in the reverse scan order

also comprises

determining a context number for a second to fourteenth bin of

the magnitude of each transform coefficient by a number of

transform coefficients already coded in the reverse scan order

having a magnitude of greater than 1;

context-adaptively coding the second to fourteenth bins of the

transform coefficients using the context numbers determined.

Claim 42 (new): The method according to claim 33, wherein

coding the transform coefficients in the reverse scan order

also comprises

coding x-th bins with x>14 of the magnitude of the transform

coefficients using a non-adaptive context.

Claim 43 (new):   The method according to claim 1, wherein coding the significance mapping comprises coding the symbols SIG and LAST context-adaptively by use of context numbers indicated by the corresponding scan position of the transform coefficient considered, with the context numbers for SIG and LAST being different.

Claim 44 (new):   The method according to claim 24, wherein coding the significance mapping and coding the values of the transform coefficients is performed by arithmetical coding.

Claim 45 (new):   A method for decoding a coding of a significance mapping and a subsequent coding of values of transform coefficients being unequal to zero for blocks of (video) pictures containing transform coefficients being unequal to zero, wherein the significance mapping specifies the positions of the transform coefficients being unequal to zero in a scan order and comprises, in the scan order, - except for the last scan position in the scan order - a one-bit symbol (SIG) for each coefficient of the block and a one-bit symbol (LAST) for each significant coefficient of the block, wherein (SIG) serves for identifying significant coefficients and (LAST) indicates whether there are further

significant transform coefficients in the block, and the

coding of values of transform coefficients being unequal to

zero comprises coded values of the transform coefficients

being unequal to zero in a reverse scan order - starting from

the last transform coefficient being unequal to zero,

comprising the steps of:

arithmetically decoding the significance mapping; and

arithmetically decoding the coded values of transform

coefficients being unequal to zero in reverse scan order.

Claim 46 (new): A device for decoding a coding of a

significance mapping and a subsequent coding of values of

transform coefficients being unequal to zero for blocks of

(video) pictures containing transform coefficients being

unequal to zero, wherein the significance mapping specifies

the positions of the transform coefficients being unequal to

zero in a scan order and comprises, in the scan order, -

except for the last scan position in the scan order - a one-

bit symbol (SIG) for each coefficient of the block and a one-

bit symbol (LAST) for each significant coefficient of the

block, wherein (SIG) serves for identifying significant

coefficients and (LAST) indicates whether there are further

significant transform coefficients in the block, and the

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coding of values of transform coefficients being unequal to

zero comprise coded values of the transform coefficients being

unequal to zero in a reverse scan order - starting from the

last transform coefficient being unequal to zero, comprising:

means for arithmetically decoding the significance mapping;

and

means for arithmetically decoding the coded values of

transform coefficients being unequal to zero in reverse scan

order.